



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,332	07/31/2003	Ernest D. Miller	26669/4:2	4195
3528	7590	05/24/2006	EXAMINER	
STOEL RIVES LLP 900 SW FIFTH AVENUE SUITE 2600 PORTLAND, OR 97204-1268			WILLIAMS, THOMAS J	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 05/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 7, 2006 has been entered.

#### ***Specification***

2. The disclosure is objected to because of the following informalities: paragraph 29, the phrase “frustrum” should be changed to “frustum”. The phrase appears in lines 14 and 16.

Appropriate correction is required.

#### ***Claim Objections***

3. Claim 6 is objected to because of the following informalities: line 2, “frustrum” should be changed to “frustum”. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4-7, 9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3,171,691 to Buehrig.

Re-claim 1, Buehrig discloses a micro-support cushion system, comprising: a generally planer base 18 formed from a polymeric material (see column 2 lines 11-16); a plurality of spring

Art Unit: 3683

structures 21 are arranged in a pattern overlying the base, each spring structure contacts the base; each spring structure comprises a top compression layer 23 having a contact surface and a corresponding bottom compression layer having a contact surface, the layers are formed from compressible materials, the top and bottom compression layers are aligned with one another; the bottom layer has a larger contact surface area than the corresponding top layer, thereby providing a higher compression rate than the top layer (see column 2 lines 26-28); once the top layer is compressed, additional force applied to the top layer is transferred through the top layer to the corresponding bottom layer.

Re-claim 2, portions 22 function as connecting portions.

Re-claim 4, Buehrig discloses a micro-support cushion system, comprising: a base sheet 18 and a top sheet 17 formed from compressible materials; a plurality of layered spring structures 21 are integrally formed on the base sheet 18; a plurality of compression structures 21 are integrally formed in the top sheet 17, the compression structures have a layered structure so as to provide gradual changes in compression rate as increasing force is applied, the layered compression structures are aligned over corresponding layered spring structures.

Re-claims 5 and 6, see figure 3.

Re-claim 7, Buehrig discloses a layered spring assembly, comprising: a first base 18 having a layered spring structure formed thereon from a compressible material; a second base 17 having a compression structure formed thereon from a compressible material; each structure is aligned with one another for transfer of applied force through one structure to the other (see figure 4); the spring structure is layered with progressively larger contact areas for contacting the corresponding compression structure, as would occur under extreme loads.

Art Unit: 3683

Re-claim 9, the compression structure is layered.

Re-claim 11, see figure 3.

6. Claims 1, 2, 7, 8, 11, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,186,582 to Beckmann.

Re-claim 1, Beckmann discloses in figure 13 a micro-support cushion system, comprising: a generally planer base formed from a polymeric material; a plurality of spring structures 7 are arranged in a pattern overlying the base, each spring structure contacts the base; each spring structure comprises a top compression layer having a contact surface and a corresponding bottom compression layer having a contact surface, the layers are formed from compressible materials, the top and bottom compression layers are aligned with one another; the bottom layer has a larger contact surface area that the corresponding top layer, thereby providing a higher compression rate than the top layer; once the top layer is compressed, additional force applied to the top layer is transferred through the top layer to the corresponding bottom layer.

Re-claim 2, see figure 13, the layers are connected by connecting portions.

Re-claim 7, Beckmann discloses in figure 13 a layered spring assembly, comprising: a first base having a layered spring structure formed thereon from a compressible material; a second base 1 having a compression structure formed thereon from a compressible material; each structure is aligned with one another for transfer of applied force through one structure to the other; the spring structure is layered with progressively larger contact areas for contacting the corresponding compression structure, as would occur under extreme loads.

Re-claim 8, the compression layer 1 is substantially flat.

Re-claim 11, see figure 13.

Re-claims 14 and 15, the layered spring structure and the compression structure is solid, see figure 13 and column 3 lines 33-35.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buehrig.

Re-claim 3, Buehrig fails to teach the spacing distance between each spring structure as being about 0.25 inches. Clearly the distance between each spring structure is variable. As such it would have been obvious as a matter of design choice to have separated the spring structures by 0.25 inches, since applicant has not disclosed that having the springs separated by about 0.25 inches solves any stated problem or is for any particular purpose and it appears that the cushion system of Buehrig having the spring structures separated by about 0.25 inches would have performed as intended.

9. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buehrig in view of Beckmann.

Re-claims 12-15, Buehrig fails to teach the spring structures and the compression structures as being solid. Beckmann teaches layered spring structures having a solid formation. It would have been obvious to one of ordinary skill in the art to have formed the spring structures and compression structures of Buehrig as solid elements as taught by Beckmann, thus providing an easy means of adjusting the rate of compression for the structures.

Art Unit: 3683

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beckmann.

Re-claim 3, Beckmann fails to teach the spacing distance between each spring structure as being about 0.25 inches. Clearly the distance between each spring structure is variable. As such it would have been obvious as a matter of design choice to have separated the spring structures by 0.25 inches, since applicant has not disclosed that having the springs separated by about 0.25 inches solves any stated problem or is for any particular purpose and it appears that the cushion system of Beckmann having the spring structures separated by about 0.25 inches would have performed as intended.

***Allowable Subject Matter***

11. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

12. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is 571-272-7128. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

Art Unit: 3683

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan, can be reached at 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-6584.

TJW

May 18, 2006

**THOMAS J. WILLIAMS**  
**PRIMARY EXAMINER**

*Thomas Williams*

AU 3683

5-18-06